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(21)Application number : **2002-375071** (71)Applicant : **MITSUI CHEMICALS INC**

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(54) OLEFIN-BASED BLOCK COPOLYMER

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a new block copolymer i.e., a modification material for maintaining balanced properties in rigidity and impulsive resistance at a high level, wherein a polyethylene-based segment with a high melting point and an elastomer segment with Tg of not higher than -50°C are bonded.

SOLUTION: The olefin-based block copolymer is a copolymer of ethylene and a 3-20C α -olefin and shows a peak ascribable to a $\beta\beta$ methylene in its ^{13}C -NMR spectrum. The copolymer also exhibits a glass transition temperature(Tg) of not higher than -50°C measured by differential scanning calorimetry (DSC), a heat absorption peak ascribable to the melting point (Tm) at a temperature not lower than 105°C, a melting heat not lower than 20 J/g estimated from the melting peak area, a density of not less than 0.870 g/cm³, and a melt flow rate in the range of 0.3-50 g/10 minutes at 190°C under 2.16 kg loading.